Care CEUs

Identifying and Managing Stroke: Prevention to Recovery

1. A community health nurse is presenting data on the global burden of stroke. Which statement best reflects current evidence about stroke from the course content?

A. Stroke accounts for over 160 million disability-adjusted life years lost annually and is the third leading cause of death and disability worldwide.
B. Stroke accounts for fewer than 20 million disability-adjusted life years lost annually and is primarily a problem in low?income countries.
C. Stroke is the leading cause of communicable disease mortality and accounts for most global DALYs.
D. Stroke contributes minimally to global disability but is the leading cause of cancer-related deaths worldwide.

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2. A nurse educator asks students to define stroke. Which description is most accurate based on the course material?

A. A stroke is a sudden brain attack in which blood flow to a region of the brain is impaired, leading to rapid neuronal death within minutes.
B. A stroke is a chronic neurodegenerative process in which neurons slowly atrophy over years without vascular involvement.
C. A stroke is any transient episode of dizziness or weakness that resolves within 24 hours without structural brain changes.
D. A stroke is limited to traumatic brain injuries that cause focal bleeding without affecting cerebral perfusion.

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3. When counseling a patient about stroke subtypes, which statement about ischemic stroke prevalence is most accurate?

A. Ischemic strokes account for about half of all strokes, with hemorrhagic strokes making up the remainder.
B. Ischemic strokes make up approximately 87% of all strokes.
C. Ischemic strokes are rare, representing less than 10% of stroke presentations.
D. Ischemic strokes and hemorrhagic strokes occur in equal proportions worldwide.

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4. A nurse explains to a family why rapid treatment is essential in acute stroke. Which fact best supports the emphasis on time?

A. Neuronal death during stroke is negligible in the first hour and increases only after 24 hours of ischemia.

B. Brain cells can survive for several hours without blood flow, so delays of up to three hours have minimal impact.
C. Approximately two million brain cells die each minute during a stroke, leading to irreversible damage.
D. Most stroke-related neuronal death occurs only if symptoms last longer than 48 hours.

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5. A patient asks how ischemic and hemorrhagic strokes differ. Which explanation is most consistent with the course content?

A. Ischemic stroke is caused by arterial blockage from thrombosis or embolism, whereas hemorrhagic stroke results from an artery in the brain leaking or rupturing.
B. Ischemic stroke is caused by venous congestion, whereas hemorrhagic stroke results exclusively from low blood pressure.
C. Ischemic stroke involves gradual narrowing of veins, whereas hemorrhagic stroke is due to immune-mediated demyelination.
D. Ischemic stroke is always caused by trauma, whereas hemorrhagic stroke occurs only in patients with congenital AVMs.

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6. A nurse is educating a patient who recently experienced a transient ischemic attack (TIA). Which statement accurately reflects the prognostic significance of TIA?

A. TIAs always cause permanent neurological damage and are equivalent to minor ischemic strokes.
B. TIAs are benign events that rarely precede stroke and therefore do not require further evaluation.
C. Approximately 1 in 3 individuals who experience a TIA will eventually have a stroke, with about half of those strokes occurring within a year.
D. The risk of stroke after TIA is limited to the first 7 days, after which risk returns to baseline.

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7. A clinician reviewing a CT scan notes hemorrhagic transformation of a prior ischemic infarct. Which pathophysiologic explanation aligns with the course material?

A. Hemorrhagic transformation occurs only when rtPA is overdosed and is unrelated to ischemic injury.
B. Rapid normalization of blood glucose directly lyses neurons and causes secondary parenchymal bleeding.
C. Primary venous obstruction prevents any blood flow into infarcted tissue, so hemorrhage must originate from remote trauma.
D. Disruption of the blood–brain barrier after ischemia and reperfusion allows blood cells to leak into previously infarcted brain tissue.

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8. A resident asks which type of stroke has the highest lethality. Based on the content, which answer is most accurate?

A. Lacunar strokes, because they are small vessel events, have the highest mortality despite limited deficits.
B. Brainstem strokes, which account for about 10–15% of strokes, are the most lethal form.
C. Anterior cerebral artery infarctions are the most lethal due to isolated leg weakness.
D. TIAs have the highest lethality because they frequently recur within 24 hours.

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9. During teaching about hemorrhagic stroke, a nurse differentiates primary from secondary injury. Which description of secondary injury is correct?

A. Secondary injury occurs only in ischemic strokes treated with rtPA and not in spontaneous hemorrhages.
B. Secondary injury refers solely to mechanical compression from the initial hematoma mass effect on surrounding tissue.
C. Secondary injury is limited to reversible vasospasm that resolves without cellular damage.
D. Secondary injury involves inflammation, disruption of the blood–brain barrier, edema, free radical overproduction, and toxic effects from hemoglobin and iron released by the hematoma.

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10. A patient with long-standing hypertension asks why their blood pressure is such a concern for stroke. Which response best reflects the course material?

A. Hypertension (?140/90 mmHg) is the most critical risk factor for stroke and causes arterial damage, including media degeneration, elastic lamina breaks, smooth muscle fragmentation, and microaneurysm formation.
B. Hypertension is a minor contributor compared with cholesterol and mainly affects venous circulation rather than arteries.
C. Hypertension increases stroke risk only if systolic blood pressure exceeds 200 mmHg and usually spares cerebral vessels.
D. Hypertension primarily leads to transient symptoms and has little influence on long-term stroke risk.

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11. A nurse is reviewing risk factors with a patient. Which combination correctly categorizes modifiable and non?modifiable stroke risk factors according to the course content?

A. Modifiable: age, race, family history; Non?modifiable: hypertension, smoking, hypercholesterolemia.
B. Modifiable: hypertension, diabetes, smoking; Non?modifiable: age, biological sex, family history of stroke.
C. Modifiable: blood type, sex, sickle cell disease; Non?modifiable: physical inactivity, obesity, alcohol intake.
D. Modifiable: living in the stroke belt, prior stroke; Non?modifiable: blood pressure, lipid levels.

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12. A nurse caring for a patient in a socioeconomically disadvantaged neighborhood wants to explain how social determinants affect stroke risk. Which explanation is most consistent with the course content?

A. Neighborhood disadvantage lowers stroke risk by reducing exposure to healthcare interventions that might cause overtreatment.
B. Social determinants have minimal influence on stroke because genetic factors and age fully account for most of the observed disparities.
C. Limited access to healthy foods, transportation, pharmacies, high?quality care, and safe recreational options increases stroke risk even among individuals of the same race.
D. Education and income affect heart disease but are unrelated to cerebrovascular outcomes.

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13. A patient who recently recovered from severe COVID?19 asks whether the infection affects stroke risk. Which response is supported by the course content?

A. COVID?19 is associated only with hemorrhagic stroke and has no effect on ischemic stroke incidence after recovery.
B. COVID?19 is an independent risk factor for ischemic stroke, likely related to a cytokine?driven hypercoagulable state, with higher cardiovascular disease incidence in severe cases.
C. COVID?19 reduces long?term stroke risk because inflammatory responses protect against atherosclerosis.
D. Stroke risk after COVID?19 is driven solely by preexisting cardiovascular disease and disappears when adjusting for those conditions.

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14. A pregnant patient with preeclampsia asks why her obstetrician is so concerned about stroke. Which explanation reflects the course material?

A. Pregnancy?related stroke occurs only in patients with gestational diabetes and is unrelated to blood pressure.
B. Hypertension during pregnancy, particularly preeclampsia, is the leading cause of pregnancy?related stroke and increases both short?term and later?life stroke risk.
C. Stroke risk is lower during pregnancy because hypercoagulability protects against intracranial hemorrhage.
D. Pregnancy increases stroke risk only during labor and not in the postpartum period.

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15. A Black patient living in Mississippi asks whether their background affects stroke risk. Which statement best synthesizes race, geography, and stroke disparities from the course content?

A. Black adults are more than twice as likely as White adults to experience stroke, and living in the 'stroke belt' states such as Mississippi further increases stroke mortality due to both lifestyle and structural factors.
B. Race has been eliminated as a stroke risk factor in recent studies, so only geography determines stroke risk.
C. Living in the stroke belt is protective for minority populations because of higher hospital density in that region.
D. Stroke incidence is similar across racial groups, but minority populations have uniformly better outcomes once hospitalized.

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16. A patient in the ED presents with sudden severe 'thunderclap' headache, vomiting, photophobia, and nuchal rigidity. Which stroke type and complication pattern best matches these findings?

A. Silent cerebral microhemorrhage detected only on imaging without clinical symptoms.
B. Lacunar infarct presenting with pure motor deficits and preserved consciousness but minimal headache.
C. Anterior cerebral artery infarction with isolated contralateral leg weakness and personality change.
D. Subarachnoid hemorrhage with classic sudden severe headache and signs of meningismus such as nuchal rigidity and positive Kernig or Brudzinski signs.

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17. A patient presents with contralateral arm and facial weakness, gaze deviation toward the lesion, and aphasia. Which vascular territory is most likely affected?

A. Posterior cerebral artery territory, producing primarily visual field deficits without motor weakness.
B. Anterior cerebral artery territory, causing isolated leg weakness and sparing the face and hands.
C. Middle cerebral artery territory, particularly a left?sided lesion involving frontal, parietal, and temporal regions.
D. Cerebellar arteries, causing isolated ataxia and vertigo without cortical signs.

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18. During rehab, a stroke survivor ignores objects on their left side despite intact sensation. They dress and groom only the right half of their body. Which concept best explains this presentation and its significance?

A. Psychogenic inattention, unrelated to lesion location and without impact on long?term functional outcomes.
B. Peripheral neuropathy, reflecting symmetric sensory loss in both extremities and predicting rapid functional recovery.
C. Unilateral spatial hemineglect, most commonly due to a right?hemisphere lesion affecting left hemispace, and associated with long?term disability and loss of functional independence.
D. Cortical blindness limited to the right visual field, typically not associated with motor or personal care deficits.

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19. A pediatric nurse is educating colleagues on recognizing perinatal stroke. Why are many perinatal strokes not identified until months or years later?

A. Perinatal strokes often present later as developmental delay, unilateral hand preference, or focal seizures rather than acute focal deficits in the neonatal period.
B. Perinatal strokes always produce immediate coma, making delayed recognition unusual.
C. Neonatal brain tissue is resistant to ischemia, so strokes do not produce any clinical manifestations.

D. Perinatal strokes are always accompanied by obvious intracranial hemorrhage on routine newborn ultrasound.

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20. A triage nurse is teaching a community group how to use the FAST mnemonic. Which instruction correctly applies this tool according to the course content?

A. Check the person’s temperature, ask them to walk a straight line, and wait 24 hours to see if symptoms improve before calling EMS.
B. Ask the person to smile (face drooping), raise both arms (arm weakness), and repeat a simple phrase (speech difficulty); if any sign is abnormal, treat it as an emergency and call for EMS immediately because time is critical.
C. Use FAST only if the person reports a severe headache and loss of consciousness at onset.
D. Ask the person to write a paragraph; if their handwriting is normal, stroke can be safely ruled out.

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21. An RN is learning to use the NIH Stroke Scale (NIHSS). Which description of its purpose and limitations is most accurate?

A. The NIHSS is designed only for prehospital use and is too time?consuming for hospital settings.
B. The NIHSS is a rapid, validated tool that scores 11 neurologic domains to quantify stroke severity and predict outcome, but it may underrepresent posterior circulation and right? hemisphere lesions.
C. The NIHSS assesses only level of consciousness and motor strength and cannot be used to standardize communication among clinicians.
D. The NIHSS is intended primarily for assessing traumatic brain injury rather than stroke.

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22. An ED team is optimizing stroke workflow. According to course recommendations, what timing target should they set for CT imaging and interpretation in suspected stroke?

A. Delay CT for at least 2 hours to allow symptoms to stabilize before imaging and interpretation.
B. Perform CT only if the patient’s NIHSS score is greater than 25 because milder strokes rarely bleed.
C. Rely on MRI as the initial study and reserve CT only for patients who deteriorate after 24 hours.
D. Obtain a non?contrast head CT within 20 minutes of hospital arrival and complete interpretation within 45 minutes to rapidly rule out intracranial hemorrhage.

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23. A stroke neurologist is explaining imaging choices to a new nurse. Which statement best reflects the comparative strengths of CT and MRI in acute stroke?

A. MRI is superior to CT for detecting all forms of intracranial hemorrhage in the first minutes after onset and is always the preferred initial test.

B. Non?contrast CT is the gold standard for quickly identifying acute hemorrhagic stroke, whereas diffusion?weighted MRI is highly sensitive for early acute ischemic infarction.
C. CT and MRI are interchangeable, so either modality can be used without affecting treatment decisions in acute stroke.
D. CT cannot identify hemorrhagic stroke, so lumbar puncture is required for all suspected bleeds.

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24. A patient arrives within 2 hours of symptom onset with suspected ischemic stroke. Which sequence of actions is required before administering IV rtPA, according to the course content?

A. Obtain only an EKG and coagulation studies; imaging is optional because rtPA is safe in hemorrhagic stroke.
B. Give rtPA immediately based on FAST findings without imaging and check glucose later to avoid delay.
C. Confirm blood glucose and obtain a non?contrast CT of the brain to exclude intracranial hemorrhage, then evaluate rtPA eligibility within the 4.5?hour window from last known well.
D. Wait 9 hours from symptom onset so that MRI can distinguish irreversible infarction before considering rtPA.

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25. A nurse caring for two stroke patients must manage blood pressure carefully. Which comparison of acute BP targets aligns with the course material?

A. In both ischemic and hemorrhagic stroke, BP should be immediately reduced to below 100/60 mmHg to minimize cerebral edema.
B. In hemorrhagic stroke, systolic BP between 150–220 mmHg should generally be lowered to about 140 mmHg, whereas in ischemic stroke treated with IV rtPA, BP should be kept below 180/105 mmHg in the first 24 hours.
C. In ischemic stroke without rtPA, any BP above 140/90 mmHg must be rapidly normalized to standard outpatient targets.
D. Blood pressure management is unnecessary in hemorrhagic stroke because ICP, not BP, determines outcome.

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26. A patient with a large ischemic stroke is admitted to the neuro ICU. Which combination of interventions most accurately reflects evidence?based management of intracranial pressure (ICP) and cerebral edema from the course content?

A. Elevate the head of the bed to 30 degrees, administer osmotic agents such as mannitol or hypertonic saline, consider hyperventilation after intubation if ICP rises, and use ventricular drainage when hydrocephalus is present.
B. Maintain the head of the bed flat, aggressively fluid restrict, avoid osmotic agents, and discourage any form of mechanical ventilation.
C. Use high?dose corticosteroids as first?line therapy and keep the patient in Trendelenburg position to improve cerebral perfusion.
D. Delay all ICP interventions for 5 days because edema peaks later and early treatment is ineffective.

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27. A nurse practitioner is planning secondary prevention for a patient with non?cardioembolic ischemic stroke. Which statement best summarizes recommended antithrombotic and DVT prophylaxis strategies?

A. Start aspirin within 24–48 hours of symptom onset to reduce recurrent ischemic stroke risk, use intermittent pneumatic compression for immobile patients, and reserve full?dose anticoagulation for specific indications such as atrial fibrillation after an appropriate delay.
B. Begin immediate full?dose anticoagulation with heparin for all ischemic strokes to prevent DVT and avoid aspirin because of bleeding risk.
C. Withhold all antithrombotic therapy for at least 30 days to ensure no hemorrhagic conversion occurs.
D. Use aspirin only if the patient has a documented DVT and avoid mechanical prophylaxis devices.

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28. A stroke survivor’s family asks why blood glucose control is emphasized during the first 24 hours after ischemic stroke. Which explanation is most consistent with the course content?

A. Only severe hypoglycemia is harmful; hyperglycemia is protective by increasing available metabolic substrate.
B. Glucose control is unimportant in acute stroke because neurons can efficiently use fatty acids instead of glucose.
C. Both hypoglycemia and hyperglycemia worsen outcomes: the brain is vulnerable to low glucose after stroke, while hyperglycemia impairs reperfusion and increases 30?day mortality and risk of hemorrhagic conversion.
D. Glycemic control affects long?term diabetes management but has no measurable impact on short?term stroke outcomes.

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29. A rehabilitation nurse wants to set expectations for a family after their relative’s moderate ischemic stroke. Which statement best reflects guidance from the course content?

A. Rehabilitation is unnecessary for patients who received rtPA because pharmacologic reperfusion fully restores function.
B. Most stroke survivors return to baseline function within 7 days if they participate in intensive early therapy.
C. If deficits persist beyond 2 weeks, further recovery is unlikely regardless of rehabilitation intensity.
D. Recovery can take months to years and often requires multidisciplinary rehabilitation; early mobilization within the first 24 hours is not recommended because it is associated with less favorable outcomes.

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30. A primary care nurse is counseling a high?risk patient on lifestyle changes to reduce stroke risk. Which plan most closely aligns with 'Life’s Essential 8' and primary prevention recommendations?

A. Adopt a healthy diet (such as a Mediterranean?style eating pattern), engage in regular physical activity, maintain healthy weight and sleep, avoid tobacco, and optimize blood lipids, glucose, and blood pressure.
B. Focus solely on weight loss through any rapid diet, while ignoring sleep, smoking, and lipid levels because they minimally affect stroke risk.
C. Rely on vitamin supplements to replace the need for physical activity and dietary changes in stroke prevention.
D. Limit lifestyle changes to reducing salt intake and schedule imaging studies every year as the main preventive strategy.

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